

~~orientation determination by transitioning the correctly determined orientation of the pre-attentive vision to the attentive vision of the foveal region.~~

- Claim 18 (Original) The method according to claim 14 ~~claim 15~~, wherein the first and second object are similarly shaped but orientated differently.
- Claim 19 (Original) The method according to claim 14 ~~claim 15~~, wherein depth and color cues are applied.

#### REMARKS/ARGUMENTS

Claims 1-18 remain pending in this Application. The limitations of Claim 2 have been incorporated into Claim 1 and the original Claim 2 has been cancelled. Applicant submits the following as a response to the pending rejections of the Examiner:

#### CLAIMS OBJECTIONS

##### A. 35 USC §112 Rejections

1. Claim 2 was rejected by the Examiner for the reason that the word "foveate" was misspelled "foveat." Claim 2, as per the discussions at the interview has been incorporated into Claim 1 and the word "foveate" properly spelled, therefore this claim rejection has been resolved, therefore this claim should be allowed.
2. Claim 5 was rejected under 35 USC §112, for the reason that it did not explain properly what the limitations are and how sound, touch or smell would be used in the current invention. Claim 5, now Claim 4, as per the discussions at the interview, has been revised to state "using an audible sound, unique smell or specific touch sensation to alert the individual to a correct response." It is believed that the foregoing amendment properly explains how sound, touch or smell are used in the current invention and therefore the Examiner's 112 rejection has been resolved, therefore, this claim should be allowed.
3. Claim 12 was rejected under 35 USC §112, for the reasons that it did not properly explain what the word "noise" meant. As per the discussions at the interview, Claim 12, now Claim 11, has been revised to indicate that the "noise" being referred to is electrical signal noise. It is believed that the foregoing amendment properly explains what is meant by the term "noise" and therefore the Examiner's 112 rejection has been resolved, therefore, this claim should be allowed.
4. Claim 14 which stated "The method of Claim 2, wherein the background included variations" was rejected under 35 USC §112, for the reason that it did not specify

what the variations were. As per the discussions at the interview, Claim 14, now Claim 13, has been amended to state "The method according to Claim 1, further including the step of varying the textural positioning of features within the background." It is believed that the foregoing amendment resolves the Examiner's rejection of Claim 14, therefore, this claim should be allowed.

5. Claim 17 was rejected under 35 USC §112 for the reason that while it disclosed calibrating attentive vision, it did not clearly show how such calibration occurred. As per the discussions at the interview, Claim 17, now Claim 15, has been amended to state "The method of Claim 15, wherein pre-attentive vision is used to calibrate the attentive vision of the foveal region." It is believed that the foregoing amendment properly resolves the Examiner's 112 rejection to Claim 17, therefore this claim should be allowed.

**B. 35 USC §103(a) Rejections**

1. Claims 1, 2, 3, 4, 6, 7, 15, 16 and 19 were rejected by the Examiner under 35 USC §103(a) as being unpatentable over Galanter, et al. (US Patent Number 5,363,154, in view of Ghahramani (US Patent Number 6,517,204). According to the Examiner, since Galanter discloses a training method using two objects and Ghahramani discloses a training method in three dimensions, it would have been obvious to one skilled in the art at the time of the invention to modify Galanter to include a three dimensional environment. With due respect to the Examiner's carefully thought out basis for rejection, while Galanter does disclose the use of two objects, Galanter's invention requires that, when viewed, the two objects fuse and become one. Specifically, in column 17, line 57, Galanter states "At this level, the two targets appear as one." As shown in column 9, line 55, "The idea is to make the display appear three dimensional . . ." These disclosures by Galanter demonstrate that what is being used is the fovea vision of the individual and not pre-attentive visions such as in the present invention. Further, while Galanter envisions that the right and left eye will see one object, the current invention requires that both the left and right eye see 2 objects. In order to clarify this critical difference between the invention disclosed in Galanter and that of the present invention, as per the discussions at the interview, Claim 1 has been amended to reflect that both the left and right eye must see two objects and that pre-attentive vision is used. Additionally, again as per the discussions at the interview, the limitations of Claim 2 have now been incorporated into Claim 1 and Claim 2 cancelled. Further, Claim 16 has been amended to state "The method of Claim 15, wherein the step of studying includes creating, positioning and viewing to teach individuals to utilize pre-attentive vision in reading." It is believed that the foregoing amendments, have properly resolved the Examiner's rejections of Claims 1, 2, 3, 4, 6, 7, 15, 16, and 19, therefore, these claims should be allowed.

2. Claims 8, 9, 10 and 13 were rejected by the Examiner under 35 USC §103(a) as being unpatentable over Galanter et al, as applied to Claims 2 and 4 above, and further in view of Lawton (US Patent Number 6,213,956). According to the Examiner, since Galanter discloses all the claim limitation and Lawton discloses varying spatial frequency and textural contrast, it would have been obvious to one skilled in the art to combine the disclosures of Lawton and Galanter. As shown above, Galanter does not teach the use of two objects viewed by both the left and right eye in connection with vision training, therefore the Examiner's rejection of Claims 8, 9, 10 and 13 should be withdrawn and these claims allowed.
3. The Examiner has rejected Claims 11 and 18 under 35 USC §103(a) as being unpatentable over Lawton as applied to Claim 8 above, and further in view of Schutz (US Patent Number 5,594,841) because that while Lawton does not teach about varying edge fidelity or having different orientation for similar shaped objects, these ideas are disclosed in Schutz. With all due respect to the Examiner's rejection, neither Lawton nor Schutz disclose the use of two objects viewed using pre-attentive vision of both the left and right eye for the purposes of testing or training. In light of the amendments referenced above, the Examiner's rejections of Claims 11 and 18 should be withdrawn and these claims allowed.

Since the amendments made by Applicant discussed above are consistent with the discussions which took place during the March 21, 2006, interview, Applicant believes that all remaining claims are directed to allowable subject matter. For the convenience of the Examiner a clean version of the revised claims are attached hereto as Exhibit "B" and incorporated by reference for all purposes. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,



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## **EXHIBIT “A”**

## Interview Summary

Application No.

10/621,334

Applicant(s)

WATKINS, WENDELL

Examiner

Sanjay Cattungal

Art Unit

3735

All participants (applicant, applicant's representative, PTO personnel):

(1) Sanjay Cattungal.(3) Wayne Pritchard.(2) Eleni Mantis-Mercader.(4) Howard Flexmann Reg. 34595(5) Wendell Watkins (Inventor)Date of Interview: 21 March 2006.

Type: a) ☐ Telephonic b) ☐ Video Conference  
c) ☒ Personal [copy given to: 1) ☒ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: 1, 2, 5, 12, 14 and 17Identification of prior art discussed: Galanter et al. 5363 154Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

R. War  
Eleni Mantis-Mercader  
Sanjay Cattungal  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Applicant's Representatives have suggested the following changes to overcome the art of record:-

In Claim 1, line 17, after "viewing" <sup>the</sup> inserting -- first and second object with the left eye and first and second object with the right eye using pre-attentive vision" and also in line 18 after "environment" inserting -- thereby viewing the first object and second object separated for training or testing vision. -- Also cancelling Claim 2 and adding the limitation in Claim 1 which states how the pre-attentive vision is achieved.

In Claim 5 the suggested changes are made to overcome <sup>the</sup> 112 2nd of record wherein after "using" inserting -- an available sound, unique smell or specific touch sensation to alert the individual of a current response -- and deleting the rest of the sentence.

In claim 12 (to overcome 112 2nd), after "varying" insert -- electronically signal --

In claim 14 (to overcome 112 2nd) after "includes" delete "variation" and insert -- varying ~~the~~ the textural positioning of features within the background --

In claim 16 after "includes" delete "applying the preceding steps" and insert -- creating, positioning and viewing --

~~In claim 17~~ Replace claim 17 with -- The method of claim 15 wherein pre-attentive vision is used to calibrate attentive vision of the foveal region --

The Examiner of record will update the search and execute a new search regarding the newly added limitations.

## **EXHIBIT “B”**



## Claims



- Claim 1 A method for training or testing vision, comprising the following steps:
- creating a three-dimensional environment including at least two objects of shape, including a first object and a second object, situated before a background;
- wherein the space between the first and second object is beyond the horizontal angular extent an individual is able to foveate using attentive vision;
- positioning the first object and the second object to produce either movement cues, color cues or depth cues; and
- viewing the first and second object with the left eye and the first and second object with the right eye using pre-attentive vision and studying the response of an individual thereto.
- Claim 2 The method according to Claim 1 wherein the horizontal angular extent is 2 degrees of the entire field width viewed by the individual.
- Claim 3 The method according to Claim 1, wherein the first and second object are positioned to produce depth cues by varying the depth range difference between the first object and the second object.
- Claim 4 The method according to Claim 1, further including the step of using an audible sound, unique smell or specific touch sensation to alert the individual to a correct response.
- Claim 5 The method of Claim 3, wherein the depth cues are provided within a range of the pre-attentive depth perception limit.
- Claim 6 The method of Claim 5, wherein the pre-attentive depth perception limit is approximately 3 arcmin.
- Claim 7 The method of Claim 3, further including the step of varying the textural contrast between the background and the first and second objects.
- Claim 8 The method according to Claim 7, wherein the step of varying includes varying textural spatial frequency.

- Claim 9      The method of Claim 7, wherein the step of varying includes varying color composition.
- Claim 10     The method of Claim 7, wherein the step of varying includes varying edge fidelity.
- Claim 11     The method according to Claim 7, wherein the step of varying includes varying electronic signal noise.
- Claim 12     The method according to Claim 1, further including the step of varying the textural contrast between the background and the first and second objects.
- Claim 13    The method according to Claim 1, wherein the background includes varying the textural positioning of features within said background.
- Claim 14     The method according to Claim 1, wherein the method is applied in the treatment of dyslexia.
- Claim 15     The method of Claim 14, wherein the step of studying includes creating, positioning and viewing to teach individuals to utilize pre-attentive vision in reading.
- Claim 16     The method of Claim 14, wherein pre-attentive vision is used to calibrate the attentive vision of the foveal region.
- Claim 17     The method according to Claim 14, wherein the first and second object are similarly shaped but orientated differently.
- Claim 18     The method according to Claim 14, wherein depth and color cues are applied.